March 4, 2016

Incident Action Plan # 005

Cover Sheet

Incident Name: Portland Metals Emissions

Unified Command

Multnomah County**,** Oregon Department of Environmental Quality**,** Oregon Health Authority

OERS# 2016-0386

Operational Period: March 4, 2016 @ 1200 – March 11, 2016 @ 1200

Included documents:
ICS 202 Incident Objectives
Operations Plan
Demobilization Plan
Unified Command Org Chart

Prepared by:
Julie Black, Planning Section Chief, Oregon Health Authority

Approved by:
DEQ: Nina DeConcini, Incident Manager, Oregon Department of Environmental Quality
MCHD: Uei Lei, Incident Manager, Multnomah County
OHA: Eric Gebbie, Incident Manager, Oregon Health Authority

ICS 202 Incident Objectives

Overarching Incident Objectives

- Prevent illness; reduce morbidity and mortality
- Demonstrate stewardship of public resources
- Keep the public informed of situation and our response
- Use partnerships and maximize cross-communications and transparency

Incident Specific Objectives

Unified Command

- Maintain inter-agency response with Multnomah County, Oregon Department of Environmental Quality and the Oregon Health Authority
- Integrate expertise of partner agencies including the Oregon Governor's Office, U.S. Forest Service (USFS), Environmental Protection Agency (EPA), Portland Public Schools (PPS), the Portland Mayor's Office, OR-OSHA
- Maintain situational awareness

Environment

- Control emission levels from Bullseye and Uroboros so impacts are reduced to a protective level
- Use relevant air toxics and other data, including validated USFS moss data to help inform monitoring priorities
- Conducting monitoring for metals near Bullseye and Uroboros to answer health concerns
- Create a risk-based air permitting program for industrial sources of air toxics

Health

- Assess the broad public health threat
- Provide health care providers guidance for working with patients on related health concerns

Communications/Community engagement

- Maintain established communication mediums for providing timely information and evidence based data to the public as well as internal and external partners

- Continue to provide communication conduits for and monitor incoming communications, inquiries and requests for speakers, resources and general assistance
- Provide culturally and linguistically appropriate services for people with limited English proficiency, and people with disabilities.

Regulatory

- Create a risk-based air permitting program for industrial sources of air toxics

See attached Operations Plan

See Communications Plan

Operations Plan:

Unified Command

- Unified command meeting schedule for this operational period:
    a. IMT briefings: Monday, Wednesday and Friday 3:00pm
    b. IM/Planning meetings: Thursday 3:00pm
- Ongoing: Maintain interagency unified command and incident command structure initiated on February 12 between DEQ, Multnomah County Health Department (MCHD) and OHA, which includes a joint information center (JIC) involving public information officers from all three agencies as well as the EPA, PPS, USFS, OSHA and the Portland Mayor's Office.
- Ongoing: Maintain IMT contact list.
- Weekly: produce and distribute Situational Status Reports (SitStats) each Wednesday
- Per Operational Period: produce and distribute the incident management team incident action plans (IAP) for each operational period – next IAP is scheduled for release on 3/11/16

Status	Date	Who	What	Internal milestone	Public release
Control emission levels from Bullseye and Uroboros so impacts are reduced to a protective level					
Complete	Feb 4	DEQ	Cadmium at Bullseye	X	X
Complete	Feb 4	DEQ	Arsenic at Bullseye	X	X
Complete	Feb 12	DEQ	Hexavalent Chromium at Bullseye	X	X
Complete	Feb 15	DEQ	Trivalent Chromium at Bullseye	X	X
Complete	Feb 8	DEQ	Cadmium at Uroboros	X	X
Complete	Not used	DEQ	Arsenic at Uroboros	X	X
Complete	Feb 12	DEQ	Chromium compounds at Uroboros	X	X
Use relevant air toxics and other data, including validated USFS moss data to help inform monitoring priorities. Conducting monitoring for metals near Bullseye and Uroboros to answer health concerns.					
Analyze soil data and characterize risk in high exposure areas from glass manufacturing					
Complete	Feb 25	DEQ	Provide SE Portland soil sampling data to OHA for risk assessment	X	
In progress	March 9	JIC	Release SE Portland soil sampling results		X
In progress	March 3	DEQ	Provide North Portland soil sampling data to OHA for risk assessment	X	
In progress	March 18	JIC	Release North Portland soil sampling results		X
In progress	March 11	DEQ, OHA, MCHD, JIC	Communicate process for community members to submit soil samples		X
Analyze air data and characterize risk in high exposure areas from glass manufacturing					

Status	Date	Who	What	Internal milestone	Public release
In progress	March 3		Provide SE Portland air sampling data to OHA for risk assessment	X	
In progress	Week of March 7	OHA, DEQ and JIC	Produce and release SE Portland air sampling results		X
In progress	March 31	OHA, DEQ and JIC	Produce and release preliminary report on national investigation into potential emissions from art and architectural glass manufacturing.		X
In progress	April	OHA, DEQ and JIC	Produce and release north Portland initial air monitoring results, from monitoring that began Feb. 19, 2016.		X
Complete	As needed	IMT	**Identify any actions** that agencies, business or residents can take to reduce exposures.	X	
Complete	As needed	IMT	**Respond to immediate acute health concerns** (if any): DEQ and the Oregon Health Authority will be screening data as it comes in, and if there are any acute health concerns, agencies will immediately notify potentially affected parties.	X	
In progress	Week of March 7	DEQ	**Inform private testing**: Develop guidance related to citizen's environmental testing of soil, including interpretive criteria for results.		X
In progress	Week of March 14	DEQ	**Initiate a collaborative air monitoring team** comprised of representatives from DEQ, OHA, Universities and other relevant entities to establish criteria for prioritizing areas identified as "hot spots" based on moss data and other data sources, identify monitoring priorities and to coordinate and collaborate on monitoring actions to inform air issues statewide.	X	
Investigate and prioritize other hotspots identified in the US Forest Service moss study					
In progress	Ongoing	DEQ	Establish criteria for prioritizing areas identified as "hot spots"	X	
In progress	Ongoing	DEQ	Prioritize the placement of monitoring resources based on review of the complete USFS study and as other information becomes available.	X	
Environmental/Health Risk Assessment					
In progress	March 7	OHA, DEQ, MCHD (IMT Risk Assessment Group)	**Develop moss hot spot assessment plan:** Develop community-informed draft plan for prioritized soil and air data collection.	X	

Status	Date	Who	What	Internal milestone	Public release
Complete	Feb 26	OHA, DEQ, MCHD (IMT Risk Assessment Group)	Initiate discussion with federal partners (ATSDR) about systematic biomonitoring study	X	
In progress	April	OHA, DEQ, MCHD (IMT Risk Assessment Group)	Based upon strength of result from convenience sample, determine whether systematic study will be performed or not	X	
In progress	March 9 (SE), April 7 (N)	OHA, DEQ, MCHD (IMT Risk Assessment Group), JIC	**Produce and release a gardening fact sheet** (FAQ) specific to the current heavy metals issue		X
In progress	March 9	OHA, DEQ, MCHD (IMT Risk Assessment Group), JIC	**Produce and release garden soil test interpretation guidelines** for concerned residents conducting their own soil tests		X
In progress	March 9	OHA, DEQ, MCHD (IMT Risk Assessment Group), JIC	**Produce and release** technical brief that summarizes the latest scientific evidence on health risks of gardening in contaminated soil and ways of reducing contamination.		X
In progress	March 4	OHA, DEQ, MCHD (IMT Risk Assessment Group)	**Determine whether there are any ongoing exposures** near glass making facilities that pose an immediate health risk (based on most recent data)	X	
In progress	March 9	OHA, DEQ, MCHD (IMT Risk Assessment Group), JIC	**Produce and release moss hot spot assessment plan**		X
In progress	Feb 26, Ongoing	OHA, DEQ, MCHD (IMT Risk Assessment Group), JIC	Initiate and maintain discussion with federal partners (ATSDR) about conducting a comprehensive Environmental Public Health Assessment (including necessary resources)	X	
In progress	Sept 1	OHA, DEQ, MCHD (IMT Risk Assessment Group)	**Produce and release complete public comment version Public Health Assessments for Southeast and N. Portland**. Public Health Assessments are conducted to determine whether and to what extent people have been, are being, or may be exposed to hazardous substances associated with an industrial facility or hazardous waste site and, if so, whether that exposure is harmful and should be stopped or reduced.		X

Status	Date	Who	What	Internal milestone	Public release
In progress	March 2017	OHA, DEQ, MCHD (IMT Risk Assessment Group), JIC	**Produce and release complete public comment Public Health Assessment report for each of the hotspots.**		X
			Urine tests for cadmium		
Complete	Feb 18	OHA	**Get labs to start sending urine data:** Continue to inform laboratories and healthcare providers about new rule OHA implemented February 18 requiring reporting of all positive urine tests for cadmium in Oregon.		X
Complete	February 26	OHA	**Plan paying for urine testing:** Develop a funding plan to cover the cost of urine cadmium testing for current residents of the area of the Southeast and North Portland "hot zones" whose insurance does not cover it.	X	
Complete	March 4	OHA	**Collect urine data:** Develop electronic reporting systems for positive urine tests for cadmium and guidelines for investigation of reported cases.	X	
In progress	March 18	OHA	**Coordinate and pay for urine testing**: For persons residing, working or attending school or daycare within ½ mile of either glass manufacturing plant, pay for and coordinate sensitive urine cadmium testing at the Washington State Public Health Laboratory, at a cost of $60 each plus any collection expenses. Subject to funding.	X	
In progress	March 3 and Ongoing throughout testing	MCHD	**Follow up on individual urine test results**: Local public health officials will follow up on such reports to collect information from patients on such things as how long the person lived in that area, occupation, work place, school attendance, and other potential sources of cadmium exposure.	X	
In progress	Ongoing	OHA, MCHD	**Advise providers on urine test results**: Direct providers with questions to Poison Control and PHESU. Consult with individual healthcare providers about individual test results if needed.	X	
In progress	March 14, Ongoing	OHA	**Summarize and report urine test results to the public**. March 14 for preliminary results, weekly ongoing.		X
Cancer analysis					
Complete	Feb 26	OHA	**Initiate cancer incidence evaluation in the area of North Portland around Uroboros Glass** that was identified in US Forest Service maps as having		X

Status	Date	Who	What	Internal milestone	Public release
			elevated environmental levels of cadmium and arsenic. The maps are being used to identify the census tracts to target for an evaluation of relevant cancer rates.		
In progress	March 21	OHA, JIC	**Complete North Portland cancer incidence evaluation** and report the results to the public.		X
In progress	March 21	OHA, JIC	**Complete additional years' cancer incidence evaluation for relevant cancers in census tracts around Bullseye and Uroboros Glass** and report results to the public.		X
As needed	As needed	OHA, JIC	**Additional cancer analyses**: None currently planned. Report the results of any additional cancer incidence evaluations to the public as they become available.	X	
Address regulatory gaps that may have led to emissions					
In progress	Feb 25	DEQ	Internal rulemaking team assigned to establish health or risk based standards for air toxics from industrial facilities that will address a gap in current state and federal regulations.	X	
In progress	March	DEQ	Initiate rulemaking with extensive stakeholder and public involvement		X
Communication					
In progress	March 14	JIC	Finalize 30-day communications plan with additions to timeline	X	
In progress	March 14	JIC	Plan logistics, develop messaging for 3/9 press conference to announce soil analysis results, healthy gardening recommendations	X	
In progress	March 14	JIC	Finalize draft of news release announcing soil analysis results, healthy gardening recommendations	X	
In progress	March 14	JIC	Distribute news release, hold press conference		X
In progress	March 14	JIC	Finalize OHP letter RE: funding for urine tests	X	
In progress	March 14	JIC	Distribute OHP letter through Health Systems		X

Status	Date	Who	What	Internal milestone	Public release
In progress	March 14	JIC	Develop statement for DEQ release of “other facilities” list	X	
In progress	March 14	JIC	Finalize interagency website, begin planning for outreach, promotion	X	
In progress	March 14	JIC	Launch interagency website		X
In progress	March 14	JIC	Complete translation, updates as needed of public-facing materials	X	
In progress	March 14	JIC	Post, distribute public-facing materials (at news conference, on website)		X
In progress	March 14	JIC	Begin message development for N. Portland cancer incidence evaluation	X	
In progress	March 14	JIC	Begin message development for urine testing funding plan	X	
In progress	March 14	JIC	Begin message development for MOUs with glass companies	X	
In progress	March 14	JIC	Complete, share, respond to public records requests (OPB)		X
Complete	Ongoing	OHA, JIC	211 Info hotline available 24/7 to answer questions from the public and health care providers		X
In progress	Ongoing	JIC	Post translated key emergency documents in Spanish, Russian, and Vietnamese within two business days of posting English version		X
In progress	Ongoing	JIC	Provide briefings for the Governor and Legislature	X	X
In progress	March 4	JIC	Train all IMT staff answering public calls on how to use TTY and relay system (711).	X	
In progress	March 4	JIC	Begin production of needed alternate formats for key documents as needed (Braille, large print, video, audio).	X	
In progress	Feb 29	DEQ, JIC	Release a preliminary report of facilities permitted to emit hexavalent chromium and other metals.		X

Status	Date	Who	What	Internal milestone	Public release
Community Engagement					
In progress	Ongoing, as needed	CE team	Participate in face-to-face community meetings as requested, in collaboration with Portland's Office of Neighborhood Involvement (to be confirmed).		X
In progress	March 4	CE team	Draft executive level community engagement strategy	X	
In progress	March 4	CE team	Log and track all community meeting requests	X	
In progress	March 4	MCHD/Hamberg	Draft – prioritization for engagement process	X	
In progress	March 11	MCHD/Hamberg	Final Executive Level Community Engagement Strategy		X
In progress	Ongoing	CE team	Process engagement request; plan; execute per above protocols	X	
Healthcare Provider Guidance					
In progress	Ongoing as needed	OHA, MCHD, JIC	Continue to update health care provider guidance on assessing risk, ordering laboratory tests, and interpreting results – updated guidance provided on Feb 29.		X
On hold	March 7	OHA, MCHD, JIC	Release handout for health care providers to give to patients – no requests from docs		X

Demobilization Plan

Objectives

- Limit staffing needs of Incident Management Team
- Maintain situational awareness
- Return agency operations centers and other resources to “steady state” as much as possible
- Closeout IMT operations, turnover documentation as appropriate
- Continue to respond to media requests and public information needs
- Reactivate limited IMT quickly if necessary

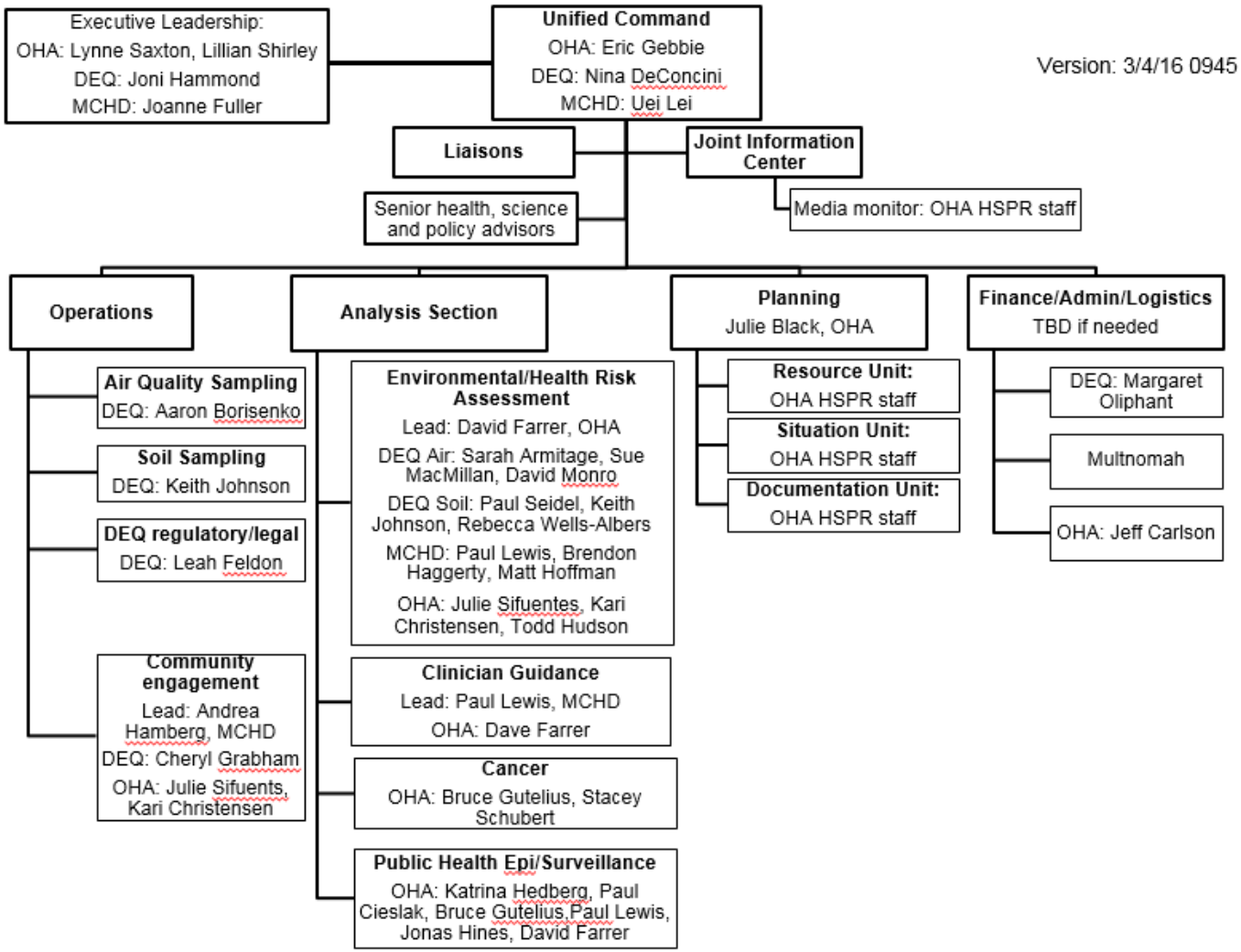
Triggers for demobilization

- No resource requests pending
- No requests for expanded activities
- Public information needs met by current staffing
- Other structure or process established which meets the needs for coordination

Triggers to reactivate

- Identification of additional dangerous emissions sources requiring complex interagency coordination
- Identification of additional dangerous emission components
- Resource requests
- Field deployment of staff not normally in field
- Increased epidemiological surveillance activities
- Increased public information needs beyond routine work
- Request of agency leadership

Unified Command Incident Management Team Org Chart



Monitoring and analysis plan for metals assessment around Bullseye Glass.

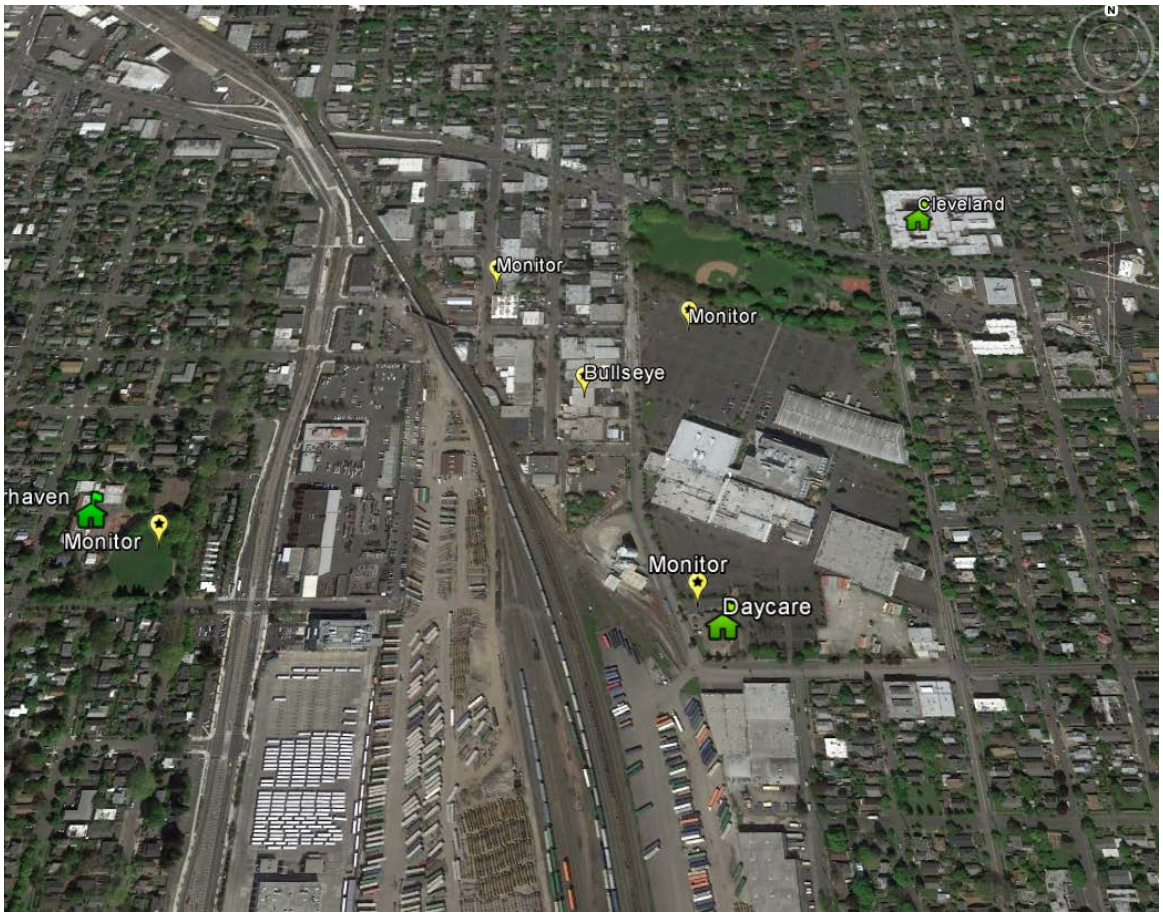
Introduction

Method

Sampling locations

Sampling will be done in four directions emanating from Bullseye Glass. The Samplers will be place near areas where children play. Children are especially susceptible to air toxics because they run around more causing them to breathe more air and they are still growing and developing.

The three sites near children's play areas are near the Powell Park field across from Cleveland High School, near Winterhaven Elementary School, and at the Daycare just south of the Fred Meyers Head Quarters building. A fourth site will be set up to the northwest of Bullseye to capture the pollutants going over the business district. Wind data collected in October showed most of the elevated days occurred when the wind was blowing from the SE to the NW. This site will capture those samples.



A proposed sampling map for metals monitoring near Bullseye Glass.

Start dates –

Site Timing
Daycare started on Feb 9th running 6am to 6pm samples.
Fred Meyer parking lot or next door at Powell Park. Awaiting power drop - This will start 2/17.
Winterhaven is waiting on power from the City or Portland Parks 2/17.
Site to the North can start on Feb 12th.
Met sites all ready operational at Reed College and next to Bullseye.

Sampling methods

PM10 Metals

DEQ is going to use two methods to collect data around Bullseye because of equipment limitations and difficulty getting power to some of the sites. DEQ has low volume (LV) BGI samplers and Low volume Air Metrics (16.7lpm) samplers which run on battery power. These will be deployed in areas where we can't get power to run the Hi Volume samplers.
The LV method uses the EPA School Air Toxics metals low volume (LV) sampler method with flow of 16.7LPM. The filter media is Teflon and the analysis is done using ICP-MS.

The HV method is EPA TO-15 which uses a Hi-Volume (HV) sampler (40 cfm) to collect samples from midnight to midnight at 40 cfm. The filter media is quartz. The analysis is done using ICP-MS. This is a NATTS TAD method.

Both methods are EPA approved methods but may result in slightly different measurements. A collocated site will help us tie these two methods together to see how well they agree. The HV method is also used at three other sites in Portland.

TSP Hexavalent Chrome

DEQ will deploy a 15lpm, flow controlled sampler (BGI sampler) with a Chrome 6+ sampler. This is a NATTS TAD method.

Continuous sampling

DEQ will also deploy a portable Met One E-Sampler (nephelometer) to track diurnal patterns. This will show when most of the particulate is occurring. This will be deployed at the daycare.

Meteorology

DEQ will also include wind speed and wind direction met stations that sit on top of roof tops. Met One 010 Wind Speed sensor, O20 Wind direction, with Campbell data logger.

Sampling Calendar.

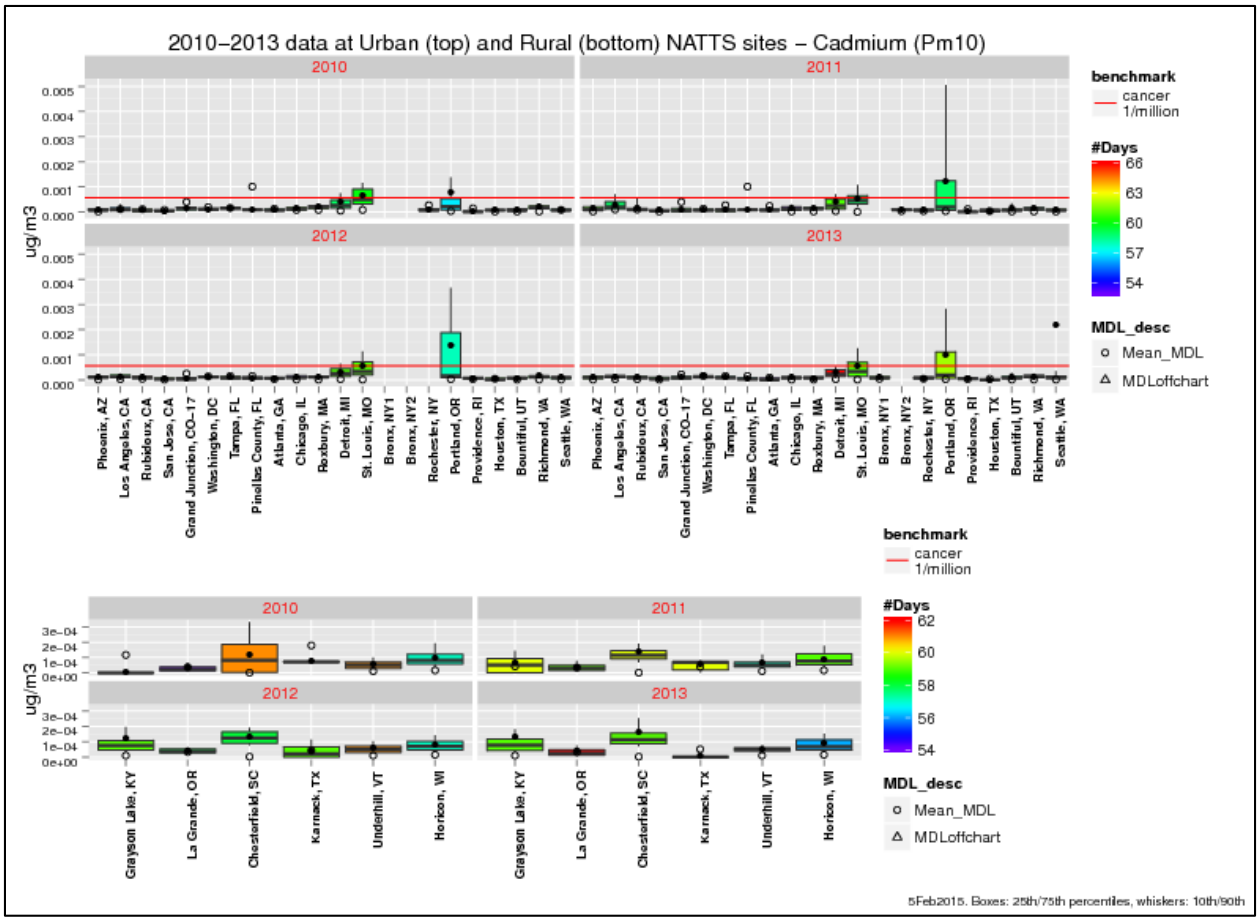
Daycare schedule:

February						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
				Prep samplers	Set up site, set up sample, Audit sampler	
7	8	9	10	11	12	13
Primary 2 Tentative start	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 24 hrs for DEQ
14	15	16	17	18	19	20
Sample 24 hrs for DEQ	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS + field blank	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 24 hrs for DEQ
21	22	23	24	25	26	27
Sample 24 hrs for DEQ	Set up and retrieve sample		Primary 1 & 2	Set up and retrieve sample		Sample 24 hrs for DEQ
28	29	**1-Mar**	2	3	4	5
Set up and retrieve sample	Set up and retrieve sample	Sample 24 hrs for DEQ	**Follow EPA 1/6 schedule going forward**			

Winterhaven, Fred Meyer Parking lot, and NW site schedule.

February						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
				Prep samplers	Set up site, set up sample, Audit sampler	
7	8	9	10	11	12	13
Primary 2 Tentative start	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 24 hrs for DEQ
14	15	16	17	18	19	20
	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS + field blank	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 6am to 6pm for DHS	Sample 24 hrs for DEQ
21	22	23	24	25	26	27
Sample 24 hrs for DEQ	Set up and retrieve sample		Sample 24 hrs for DEQ	Set up and retrieve sample		Sample 24 hrs for DEQ
28	29	**1-Mar**	2	3	4	5
Set up and retrieve sample	Set up and retrieve sample	Sample 24 hrs for DEQ	**Follow EPA 1/6 schedule going forward**			

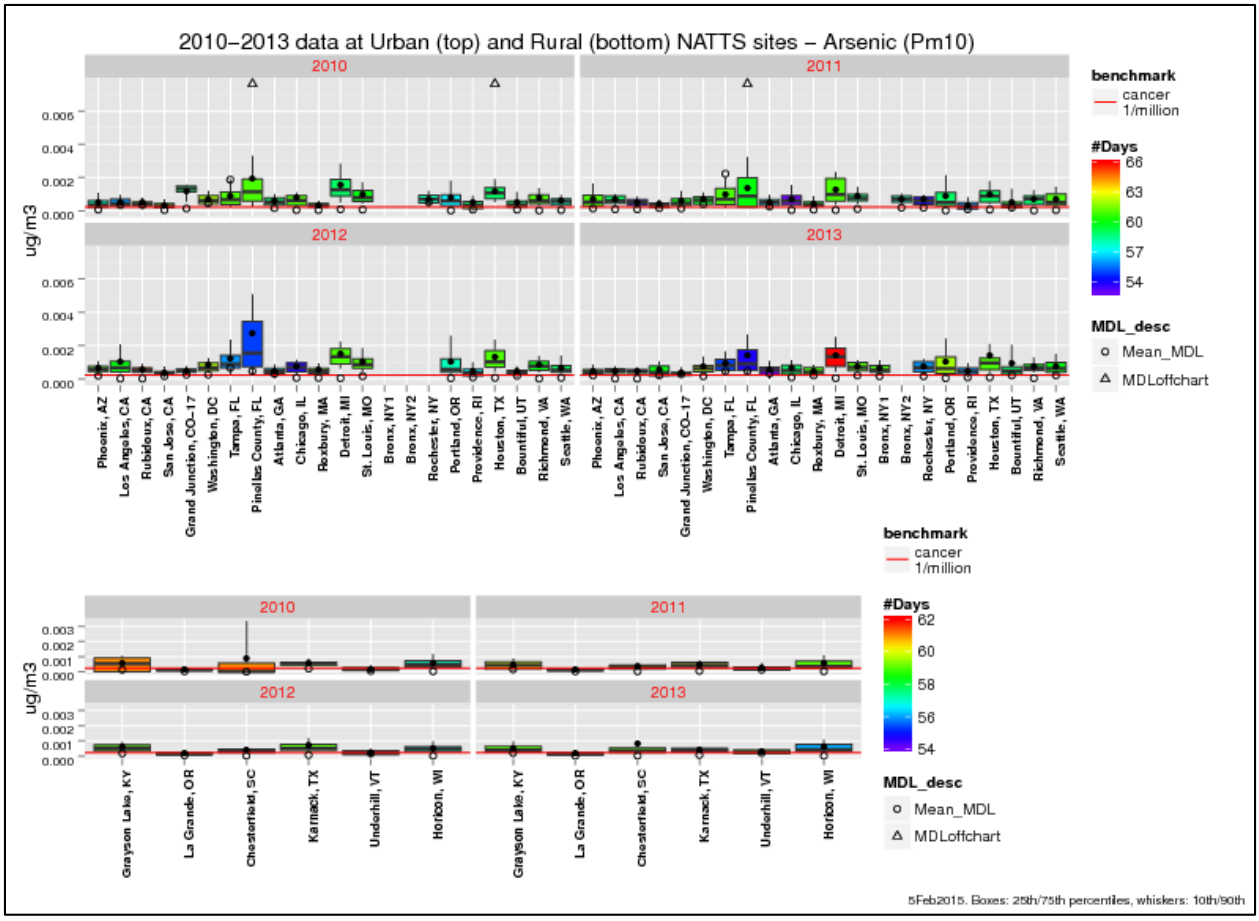
Cadmium and Arsenic Concentrations from National Air Toxics Trends Sites (NATTS)



The above charts show the distribution of cadmium concentrations for all 27 NATTS sites in micrograms/m3, for the years 2010, 2011, 2012 and 2013. Urban NATTS sites are shown above, and rural NATTS sites are below. The Portland Oregon shows significantly higher concentrations for all 4 years.

Annual Statistics of the Measured Concentrations for the Portland Site are shown below

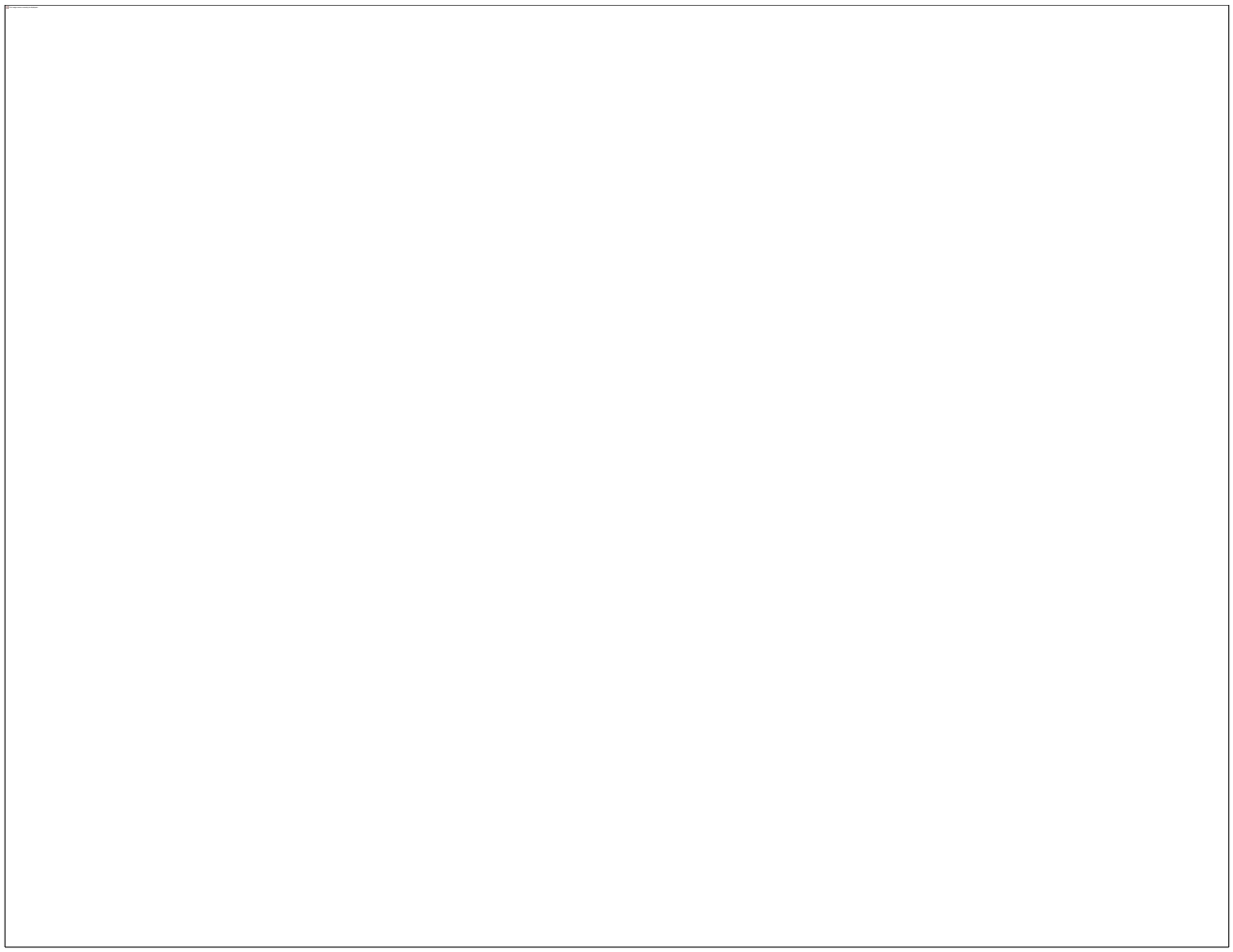
SITE	YEAR	AQS_PARAMETER_NAME	Annual Maximum (ug/m3)	Annual Average (ug/m3)
410510246	2013	Cadmium Pm10 Lc	0.009345	0.000972
410510246	2012	Cadmium Pm10 Lc	0.0166	0.001358
410510246	2011	Cadmium Pm10 Lc	0.009024	0.001217
410510246	2010	Cadmium Pm10 Lc	0.00979	0.000766



The above charts show the distribution of arsenic concentrations for all 27 NATTS sites in micrograms/m3, for the years 2010, 2011, 2012 and 2013. Urban NATTS sites are shown above, and rural NATTS sites are below. Portland is among several urban sites with elevated concentrations.

AMA_SITE_CODE	YEAR	AQS_PARAMETER_NAME	Annual Maximum (ug/m3)	Annual Average (ug/m3)
410510246	2013	Arsenic Pm10 Lc	0.0062	0.001031
410510246	2012	Arsenic Pm10 Lc	0.00387	0.001001
410510246	2011	Arsenic Pm10 Lc	0.005684	0.000935
410510246	2010	Arsenic Pm10 Lc	0.002446	0.000781

Chromium VI is excluded from this analysis because a substantial quantity of data are measured below the method detection limit (62-80%) at the Portland site.



Location of Portland NATTS Site (see marker due north of Uroboros Glass)

Pre-meeting agenda/discussion doc

General structure of the call: Non-technical discussions first, technical discussions (if any) after.

1. We expect Bullseye to:
    a. Argue they are not the major or only source of metals;
    b. Argue in favor of restarting production of chromium-containing glass;
    c. Present technical information supporting their argument; and
    d. MIGHT ask: Under what circumstances will DEQ agree to allow use of chromium (or any other metal of concern)?

2. Meeting could involve 4 different discussion topics:
    a. Legal – Limits of DEQ's authority, right to operate
    b. Technical – DEQ's basis for declaring Bullseye the most likely source of the metals emissions
    c. Technical – Information regarding hexavalent chromium emissions (or lack of emissions)
    d. Technical/legal – Under what circumstances will DEQ agree to allow use of chromium (or any other metal of concern)? May involve:
        i. Technical constraints on operation; and
        ii. Legal mechanism (Mutual Agreement and Order)

3. Identify discussion leads
    a. Legal – Limits of DEQ's authority, right to operate
        Dick Pedersen, Paul Garrahan/Gary Vrooman, _____
    b. Technical – DEQ's basis for declaring Bullseye the most likely source of the metals emissions
        Sarah Armitage, David Monro, _____
    c. Technical – Information regarding hexavalent chromium emissions (or lack of emissions)
        EPA – Steffan Johnson, ????_____
    d. Technical/legal – Under what circumstances will DEQ agree to allow use of chromium (or any other metal of concern)?
        Dick Pedersen, David Monro, _____

4. Discuss DEQ's/state's/EPA's overall approach to these discussions

5. Discuss desired outcomes

6. Other items? Fluorides, other metals, other?_____

7. End meeting